

# **LIGHT & POWER DEPARTMENT**Donal O'Callaghan, Director of Light & Power

October 15, 2007

Mr. Chandrashekhar S. Bhatt South Coast Air Quality Management District 21865 Copley Drive Diamond Bar, CA 91765

Dear Mr. Bhatt:

This letter responds to the September 14, 2007 letter from Mr. Mohsen Nazemi of your agency requesting that the City of Vernon provide documentation demonstrating that the proposed Vernon Power Plant ("VPP") will comply with the requirements of South Coast Air Quality Management District ("SCAQMD") Rule 1309.1 (c)(5)(B) as amended on August 3, 2007. This rule requires that the applicant for an In-District Electrical Generating Facility (EFG) demonstrate to the satisfaction of the Executive Officer the following:

"That renewable/alternative energy (for the purpose of this rule, renewable/alternative energy is hydropower, wind and wave power, solar and geothermal energy, and fossil fuel-based energy [provided the emissions are no more than those from a fuel cell]) in lieu of natural gas fired EGF is not a viable option for the power to be generated at that site."

The attached information (Attachment A) demonstrates that the renewable/alternative energy is not a viable option in lieu of the 943 megawatts of natural gas fired base load electricity to be generated at the VPP site.

Please contact Dr. Krishna Nand at (323) 583-8811, Ext 211, if you have any questions or if you need additional information.

Sincerely,

Donal O'Callaghan

Director of Light & Power

# Attachments

cc: Mohsen Nazemi, SCAQMD

Roger Johnson, CEC James Reede, CEC

Mike Carroll, Latham & Watkins LLP

John Carrier, CH2MHill

Krishna Nand Document Control

#### ATTACHMENT A

This Attachment "A" provides supporting documentation to demonstrate that renewable/alternative energy in lieu of natural gas fired Vernon Power Plant (VPP) is not a viable option for the power to be generated at the VPP site as required under South Coast Air Quality Management District (SCAQMD) Rule 1309.1 (c)(5)(B).

For the purpose of the SCAQMD Rule 1309.1 (c)(5)(B), renewable/alternative energy includes the following:

- Hydropower
- Wind power
- Wave power
- Solar energy
- Geothermal energy
- Fossil fuel based energy (provided the emissions are no more than those from a fuel cell)

The above renewable/alternative energy technologies were evaluated with respect to commercial availability, technical feasibility and cost-effectiveness to determine if they are viable options for replacing the 943 megawatts of natural gas fired base load generation that is proposed for the VPP site.

#### Hydropower

There is no source of hydropower at the proposed VPP site.

# Wind Power

Commercial wind energy power plants are available in the 1 MW and 1.5 MW unit size. If wind patterns were suitable for electrical power generation, which they are not, the VPP site could accommodate one or two wind turbines with a maximum capacity of 3 MW. Therefore, the available land at the VPP site is not sufficient to accommodate necessary number of wind turbines necessary to generate 943 megawatts of electrical power. Further, if such power could be generated, it would be intermittent, and could not replace the base load power to be generated by the VPP.

#### **Wave Power**

There are no suitable sites for the development of wave power because the project site is located more than 20 miles from the coast.

# **Solar Energy**

Solar energy can be used to generate electricity through the use of solar thermal systems or solar photovoltaic cells. However, electrical power can be generated only when the sun is shining; thus, solar systems can not provide base load power or follow power

demand. Also, the available land at the VPP site is not sufficient to accommodate the necessary number of solar units generating electrical power to meet the objectives of the Vernon Power Plant.

# **Geothermal Energy**

There are no suitable sites for generating electrical power using geothermal energy at the VPP site because suitable thermal resources and strata are not present.

# Fossil Fuel Based Energy

Fossil fuel based electrical power generating technologies are commercially available and could be implemented. However, because of relatively low efficiency, some of these fuels or technologies are expected to emit greater quantities of air pollutants per kilowatthour of power generated than technologies that are more efficient such as the technology proposed for the VPP (combined cycle power generating facility using natural gas).

#### **Summary**

The above analysis demonstrates that the renewable/alternative energy in lieu of natural gas fired Vernon Power Plant is not a viable option for the power to be generated at the VPP site.